IN THE CLAIMS:

Please amend the claims as follows:

1-8. (Canceled)

9. (Currently amended) A recombinant retroviral vector system comprising:

(a) a recombinant vector which undergoes promoter conversion comprising, ~~in operable linkage,~~

~~(i) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and~~

~~(ii) one or more coding sequences wherein at least one sequence encodes for a therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, cecropin, magainin, a preform thereof, a preproform thereof, a biologically active peptide derived therefrom and a combination thereof;~~

(i) a 5' long terminal repeat region comprising the structure U3-R-U5;

(ii) one or more coding sequences, said sequences being inserted into the body of the vector outside of the 5' and 3' long terminal repeat regions, wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, cecropin, magainin, a preform thereof, a preproform thereof, a biologically active analogue thereof having antimicrobial activity, and a combination thereof; and

(iii) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a

heterologous DNA fragment which can regulate the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters,

wherein after infection of a target cell, said U3 region of said 5' long terminal repeat region is replaced by said partially deleted U3 region comprising said heterologous DNA fragment, resulting in at least one of said coding sequences becoming operatively linked to said heterologous DNA fragment and said heterologous DNA fragment regulating the expression of at least one of said coding sequences in said target cell; and

(b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

10. (Canceled)

11. (Currently amended) A retroviral particle produced by the recombinant retroviral vector system according to Claim [[10]] 9 after transfecting the packaging cell line with the retroviral vector.

12. (Previously presented) A retroviral provirus produced by infection of target cells with a recombinant retroviral particle according to Claim 11 whereby the U3 region is duplicated during the process of reverse transcription in the infected target cell and appears in the 5' long terminal repeat and the 3' long terminal repeat of the resulting provirus, and the U5 of the 5' long terminal repeat is duplicated during the process of reverse transcription in the infected target cell and appears in the 3' long terminal repeat and in the 5' long terminal repeat of the resulting provirus.

13. (Canceled)

14. (Previously presented) A method for introducing nucleotide sequences into an isolated cell population comprising infecting the cell population with the recombinant retroviruses produced by the recombinant retroviral vector system according to Claim 9.

15. (Original) The method of Claim 14 wherein the cell population is selected from the group consisting of: human cells and animal cells.

16-19. (Canceled)

20. (Currently amended) A mRNA of a retroviral provirus produced by infection of target cells with a recombinant retroviral particle from a recombinant retroviral vector system comprising:

(a) a recombinant vector which undergoes promoter conversion comprising, ~~in operable linkage,~~

~~1. retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and~~

~~2. one or more coding sequences wherein at least one sequence encodes for a therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, cecropin, magainin, a preform thereof, a preproform thereof, a biologically active peptide derived therefrom and a combination thereof; and~~

(i) a 5' long terminal repeat region comprising the structure U3-R-U5;

(ii) one or more coding sequences, said sequences being inserted into the body of the vector outside of the 5' and 3' long terminal repeat regions, wherein at least one sequence encodes for at

least one therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, cecropin, magainin, a preform thereof, a preproform thereof, a biologically active analogue thereof having antimicrobial activity, and a combination thereof; and

(iii) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which can regulate the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters,

wherein after infection of a target cell, said U3 region of said 5' long terminal repeat region is replaced by said partially deleted U3 region comprising said heterologous DNA fragment, resulting in at least one of said coding sequences becoming operatively linked to said heterologous DNA fragment and said heterologous DNA fragment regulating the expression of at least one of said coding sequences in said target cell; and

(b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

21. (Currently amended) A RNA produced by a recombinant retroviral vector which undergoes promoter conversion wherein said vector comprises~~, in operable linkage~~,

~~(a) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and~~

~~(b) one or more coding sequences wherein at least one sequence encodes for a therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, cecropin, magainin, a preform thereof, a preproform thereof, a biologically active peptide derived therefrom and a combination thereof.~~

(a) a 5' long terminal repeat region comprising the structure U3-R-U5;

(b) one or more coding sequences, said sequences being inserted into the body of the vector outside of the 5' and 3' long terminal repeat regions, wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, cecropin, magainin, a preform thereof, a preproform thereof, a biologically active analogue thereof having antimicrobial activity, and a combination thereof; and

(c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which can regulate the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters,

wherein after infection of a target cell, said U3 region of said 5' long terminal repeat region is replaced by said partially deleted U3 region comprising said heterologous DNA fragment, resulting in at least one of said coding sequences becoming operatively linked to said heterologous DNA fragment and said heterologous DNA fragment regulating the expression of at least one of said coding sequences in said target cell.

22. (Previously presented) An isolated host cell infected with a virion according to Claim 11.

23-25. (Canceled)

26. (Previously presented) A non-human host cell infected with a virion according to Claim 11.

27. (Currently amended) A recombinant retroviral vector comprising, in operable linkage,

(a) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and

(b) one or more coding sequences which encode a therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, a preform thereof, a preproform thereof, a biologically active ~~peptide derived therefrom~~ analogue thereof having antimicrobial activity, and a combination thereof.

28. (Currently amended) A recombinant retroviral vector comprising in operable linkage,

(a) a 5' long terminal repeat region comprising the structure U3-R-U5;

(b) one or more ~~of said~~ coding sequences wherein at least one sequence encodes for a therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, a preform thereof, a preproform thereof, a biologically active ~~peptide derived therefrom~~ analogue thereof having antimicrobial activity, and a combination thereof; and

(c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence, followed by the R and U5 region to undergo promoter conversion.

29. (Canceled)

30. (Previously presented) The recombinant retroviral vector according to Claim 28, wherein said polylinker sequence comprises at least one unique restriction site and, optionally, at least one insertion of a heterologous DNA fragment.

31. (Currently amended) A recombinant retroviral vector comprising in operable linkage,

(a) a 5' long terminal repeat region comprising the structure U3-R-U5;

(b) one or more ~~of said~~ coding sequences wherein at least one sequence encodes for a therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, a preform thereof, a preproform thereof, a biologically active ~~peptide derived therefrom~~ analogue thereof having antimicrobial activity, and a combination thereof; and

(c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which regulates the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters.

32-33. (Canceled)

34. (Previously presented) The recombinant retroviral vector according to Claim 30, wherein said heterologous DNA fragment encodes a peptide selected from the group consisting of marker peptides, therapeutic peptides, cell cycle regulatory peptides, tumor suppressor peptides, antiproliferation peptides and cytokines.

35. (Currently amended) A recombinant retroviral vector system comprising:

(a) a recombinant vector comprising, in operable linkage,

(i) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and

(ii) one or more coding sequences wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide wherein the antimicrobial peptide is selected from the group consisting of: melittin, a preform thereof, a preproform thereof, a biologically active ~~peptide derived therefrom~~ analogue thereof having antimicrobial activity, and a combination thereof; and

(b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

36. (Previously presented) The recombinant retroviral vector system according to Claim 35, wherein said retroviral vector comprises, in operable linkage,

(a) a 5' long terminal repeat region comprising the structure U3-R-U5;

(b) one or more of said coding sequences; and

(c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence, followed by the R and U5 region to undergo promoter conversion.

37. (Previously presented) A retroviral particle produced by the recombinant retroviral vector system according to Claim 36 after transfecting the packaging cell line with the retroviral vector system.

38. (Previously presented) A retroviral provirus produced by infection of target cells with a recombinant retroviral particle according to Claim 37 whereby the

U3 region duplicated during the process of reverse transcription in the infected target cell and appears in the 5' long terminal repeat and the 3' long terminal repeat of the resulting provirus, and the U5 of the 5' long terminal repeat duplicated during the process of reverse transcription in the infected target cell and appears in the 3' long terminal repeat and in the 5' long terminal repeat of the resulting provirus.

39. (Previously presented) The retroviral provirus of Claim 38 wherein said polylinker comprises heterologous DNA.

40. (Previously presented) A method for introducing nucleotide sequences into an isolated cell population comprising infecting the cell population with the recombinant retroviruses produced by the recombinant retroviral vector system according to Claim 35.

41-45. (Canceled)

46. (Currently amended) A mRNA of a retroviral provirus produced by infection of target cells with a recombinant retroviral particle from a recombinant retroviral vector system comprising:

(a) a recombinant vector comprising, in operable linkage

(i) a retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and

(ii) one or more coding sequences wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide wherein the antimicrobial peptide is selected from the group consisting of: melittin, a preform thereof, a preproform thereof, a biologically active ~~peptide derived therefrom~~ analogue thereof having antimicrobial activity, and a combination thereof; and

(b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

47. (Currently amended) A RNA produced by a ~~vector~~ recombinant retroviral vector system comprising:

(a) a recombinant vector comprising, in operable linkage,

(i) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and

(ii) one or more coding sequences wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide wherein the antimicrobial peptide is selected from the group consisting of: melittin, a preform thereof, a preproform thereof, a biologically active ~~peptide derived therefrom~~ analogue thereof having antimicrobial activity, and a combination thereof; and

(b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

48. (Previously presented) An isolated host cell infected with a virion according to Claim 37.

49-51. (Canceled)

52. (Previously presented) A non-human host cell infected with a virion according to Claim 47.

53-54. (Canceled)

55. (Currently amended) A recombinant retroviral vector which undergoes promoter conversion comprising, ~~in operable linkage,~~

~~(a) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and~~

~~(b) one or more coding sequences which encode a therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: cecropin, SB-37, Shiva-1, a preform thereof, a preproform thereof, a biologically active peptide derived therefrom, and a combination thereof.~~

(a) a 5' long terminal repeat region comprising the structure U3-R-U5;

(b) one or more coding sequences, said sequences being inserted into the body of the vector outside of the 5' and 3' long terminal repeat regions, wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: cecropin, SB-37, Shiva-1, a preform thereof, a preproform thereof, a biologically active analogue thereof having antimicrobial activity, and a combination thereof; and

(c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which can regulate the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters,

wherein after infection of a target cell, said U3 region of said 5' long terminal repeat region is replaced by said partially deleted U3 region comprising said heterologous DNA fragment, resulting in at least one of said coding sequences becoming operatively linked to said heterologous DNA fragment and said heterologous DNA fragment regulating the expression of at least one of said coding sequences in said target cell.

56-59. (Canceled)

60. (Currently amended) A recombinant retroviral vector system comprising:

(a) a recombinant vector which undergoes promoter conversion comprising, ~~in operable linkage,~~

~~(i) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and~~

~~(ii) one or more coding sequences wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide wherein the antimicrobial peptide is selected from the group consisting of: cecropin, a preform thereof, a preproform thereof, a biologically active peptide derived therefrom, and a combination thereof, and~~

(i) a 5' long terminal repeat region comprising the structure U3-R-U5;

(ii) one or more coding sequences, said sequences being inserted into the body of the vector outside of the 5' and 3' long terminal repeat regions, wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: cecropin, a preform thereof, a preproform thereof, a biologically active analogue thereof having antimicrobial activity, and a combination thereof; and

(iii) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which can regulate the expression of at least one of the coding sequences of said vector, and

comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters,

wherein after infection of a target cell, said U3 region of said 5' long terminal repeat region is replaced by said partially deleted U3 region comprising said heterologous DNA fragment, resulting in at least one of said coding sequences becoming operatively linked to said heterologous DNA fragment and said heterologous DNA fragment regulating the expression of at least one of said coding sequences in said target cell; and

(b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

61. (Canceled)

62. (Currently amended) A retroviral particle produced by the recombinant retroviral vector system according to Claim [[61]] 60 after transfecting the packaging cell line with the retroviral vector system.

63. (Previously presented) A retroviral provirus produced by infection of target cells with a recombinant retroviral particle according to Claim 62 whereby the U3 region duplicated during the process of reverse transcription in the infected target cell and appears in the 5' long terminal repeat and the 3' long terminal repeat of the resulting provirus, and the U5 of the 5' long terminal repeat duplicated during the process of reverse transcription in the infected target cell and appears in the 3' long terminal repeat and in the 5' long terminal repeat of the resulting provirus.

64. (Previously presented) The retroviral provirus of Claim 63 wherein said polylinker comprises heterologous DNA.

65. (Previously presented) A method for introducing nucleotide sequences into an isolated cell population comprising infecting the cell population with the recombinant retroviruses produced by the recombinant retroviral vector system according to Claim 60.

66-69. (Canceled)

70. (Currently amended) A mRNA of a retroviral provirus produced by infection of target cells with a recombinant retroviral particle from a recombinant retroviral vector system comprising:

(a) a recombinant vector which undergoes promoter conversion comprising, ~~in operable linkage,~~

~~(i) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and~~

~~(ii) one or more coding sequences wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide wherein the antimicrobial peptide is selected from the group consisting of: cecropin, a preform thereof, a preproform thereof, a biologically active peptide derived therefrom, and a combination thereof, and~~

(i) a 5' long terminal repeat region comprising the structure U3-R-U5;

(ii) one or more coding sequences, said sequences being inserted into the body of the vector outside of the 5' and 3' long terminal repeat regions, wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: cecropin, a preform thereof, a preproform thereof, a biologically

active analogue thereof having antimicrobial activity, and a combination thereof; and

(iii) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which can regulate the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters,

wherein after infection of a target cell, said U3 region of said 5' long terminal repeat region is replaced by said partially deleted U3 region comprising said heterologous DNA fragment, resulting in at least one of said coding sequences becoming operatively linked to said heterologous DNA fragment and said heterologous DNA fragment regulating the expression of at least one of said coding sequences in said target cell; and

(b) a packaging cell line harboring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

71. (Currently amended) A RNA produced by a vector which undergoes promoter conversion wherein said vector comprises, ~~in operable linkage,~~

~~(a) retroviral vector DNA or at least a portion of the retroviral vector DNA comprising elements necessary for infection and direction of expression in target cells; and~~

~~(b) one or more coding sequences wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide wherein the antimicrobial peptide is selected from the group consisting of: cecropin, a preform thereof, a preproform thereof, a biologically active peptide derived therefrom, and a combination thereof.~~

(a) a 5' long terminal repeat region comprising the structure U3-R-U5;

(b) one or more coding sequences, said sequences being inserted into the body of the vector outside of the 5' and 3' long terminal repeat regions, wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: cecropin, a preform thereof, a preproform thereof, a biologically active analogue thereof having antimicrobial activity, and a combination thereof; and

(c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which can regulate the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters,

wherein after infection of a target cell, said U3 region of said 5' long terminal repeat region is replaced by said partially deleted U3 region comprising said heterologous DNA fragment, resulting in at least one of said coding sequences becoming operatively linked to said heterologous DNA fragment and said heterologous DNA fragment regulating the expression of at least one of said coding sequences in said target cell.

72. (Previously presented) An isolated host cell infected with a virion according to Claim 62.

73-74. (Canceled)

75. (Previously presented) An isolated host cell infected with a virion according to Claim 62.

76-78. (Canceled)

79. (Currently amended) A recombinant retroviral vector which undergoes promoter conversion comprising ~~in operable linkage~~,

(a) a 5' long terminal repeat region comprising the structure U3-R-U5;

(b) one or more coding sequences, said sequences being inserted into the body of the vector outside of the 5' and 3' long terminal repeat regions, wherein at least one sequence encodes for at least one therapeutic antimicrobial peptide, wherein the antimicrobial peptide is selected from the group consisting of: melittin, cecropin, magainin, a preform thereof, a preproform thereof, a biologically active ~~peptide derived therefrom~~ analogue thereof having antimicrobial activity having antimicrobial activity, and a combination thereof; and

(c) a 3' long terminal repeat region comprising a completely or partially deleted U3 region wherein said deleted U3 region is replaced by a polylinker sequence which comprises at least one unique restriction site and at least one insertion of a heterologous DNA fragment which ~~regulates~~ can regulate the expression of at least one of the coding sequences of said vector, and comprises at least one or more elements selected from the group consisting of: regulatory elements and promoters,

wherein after infection of a target cell, said U3 region of said 5' long terminal repeat region is replaced by said partially deleted U3 region comprising said heterologous DNA fragment, resulting in at least one of said coding sequences becoming operatively linked to said heterologous DNA fragment and said heterologous DNA fragment regulating the expression of at least one of said coding sequences in said target cell.